

UNITED STATES PATENT OFFICE.

JOHANN LIEB, OF COLOGNE, GERMANY.

METHOD OF PRODUCING PIT-COAL OR COKE BRIQUETS.

SPECIFICATION forming part of Letters Patent No. 756,124, dated March 29, 1904.

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To all whom it may concern:

Be it known that I, JOHANN LIEB, a subject of the King of Prussia, Emperor of Germany, residing at Cologne, in the Province of Rhenish Prussia, Prussia, Germany, have invented certain new and useful Improvements in Methods of Producing Pit-Coal or Coke Briquets; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

The object of this invention is to reduce the relative quantity of resin or other costly agglutinants used in making briquets of finely comminuted coal.

To this end I first thoroughly mix a quantity of fine coal of any suitable kind with a much smaller quantity of resin or equivalent agglutinant. This mixture is next moistened with water, forming a thick paste of proper consistency for molding easily. The briquets are then molded or shaped from this mass with light pressure. They are next removed to a drying-room and exposed to a temperature which will vaporize the water contained in them and soften the resin or other agglutinant, so that the escaping steam will carry particles of said agglutinant into every part of the briquet. By reason of this thorough distribution of the agglutinant almost every particle of it is made to do its maximum service, and

a tenacious homogeneous briquet will in each instance be produced with the minimum quantity of agglutinant. For convenience some soluble adhesive material may be supplied in the water to the pasty mass before forming the briquets. This will temporarily aid in holding the said mass together until the heat, while vaporizing or disintegrating such material, supplies a permanent substitute by the aforesaid distribution of particles of resin, coal-tar, or the like through the action of steam.

Having thus described my invention, what I claim as new, and desire to secure by Letters Patent, is—

The process of producing briquets of fuel consisting in mixing a small quantity of resin or equivalent agglutinant with fine coal; then moistening the mixture with water to the consistency of a mass suitable for molding; then shaping the briquets and finally subjecting them to such heat as will greatly soften the resin, vaporize the water and cause the steam thus produced to carry the particles of resin into every part of the briquet substantially as set forth.

JOHANN LIEB.

Witnesses:

W. FRHRR. V. LYNDKER,
CARL W. SCHMITT.